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AUTHOR Edwards, Len; Smith, J. R.
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ABSTRACT

An evaluation was conducted of the Chance Program at Graceland College in Lamoni, Iowa. The Chance Program is a postsecondary intervention program that addresses pronunciation, spelling, and reading comprehension deficits among learning-disabled students. In a quasi-experiment, test scores of college students (N=93) who participated in the Chance Program were compared to test scores of college students (N=6) who qualified but elected not to participate in the Chance Program. Results indicated that the Chance Program significantly improved student pronunciation, spelling, and reading comprehension skills. The gains in test scores were also correlated to grade point average (GPA) gains. The average gain in GPA was .49 and moderate correlations were found between some test score gains. A list of 16 suggested readings is attached. (DB)

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CHANCE

A Post-secondary Program for the Learning Disabled:

An Evaluation

by

Len Edwards

J.R. Smith

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Abstract

An evaluation of Graceland College's Chance Program, a post-secondary intervention program that addresses pronunciation, spelling and reading comprehension deficits among learning disabled students, was completed. In a quasi-experiment, test scores of college students who participated in the Chance Program were compared to test scores of college students who qualified but elected not to participate in the Chance Program. Both groups were given the same battery of tests. Results indicate the Chance Program significantly increases pronunciation, spelling, and reading comprehension skills. The gains in test scores were also correlated to GPA gains. The average gain in GPA was .49 and moderate correlations were found between some test score gains.

The Chance Program

The Chance Program, located at Graceland College in Lamoni, Iowa, is a program designed to assist students to develop spelling, pronunciation, and reading comprehension abilities. The vocal plaudits for the results of this program are numerous from many of the faculty who work with Chance clients, however, this evaluation was undertaken to determine whether or not students' improvements in literacy skills and grades were in fact due to the Chance Program.

PROGRAM DESCRIPTION

Program Operations

The Chance Program is available to any Graceland College student who demonstrates a significant deficit in pronunciation, spelling, and/or reading comprehension skills. Both the type and amount of deficit are measured via a battery of 9 tests and through interviews by the Chance director. The tests that are currently used are the Lindamood Auditory Conceptualization (LAC), Peabody Picture Vocabulary (PPV), Woodcock Reading Mastery (WRM), Wide Range Achievement Test for Reading (WRAT-R) and Spelling (WRAT-S), Slosson Oral Reading (SORT), Gray Oral Reading Test (GORT), Test of Written Spelling, and College Board for Reading Comprehension (CBRC). In addition, the Wechsler Adult Intelligence Scale-Revised(WAIS-R) is administered to potential clients.

Spelling and pronunciation deficits are addressed by the Lindamood Auditory Discrimination in Depth (ADD) program. This program is provided for students who have difficulty auditorily determining the order, number, and identity of sounds within words. Students with this problem have extreme difficulty successfully completing spelling and pronunciation tasks. The program seeks to remedy these difficulties by directing the student's attention to their mouth movements in order to determine the order, number, and identity of speech "feelings" within words. This enables the student to use sight (the eye), sound (the ear), and feeling (the mouth) to check the correctness of their spelling and/or reading (Lindamood, C. H. & P.C., 1969).

Reading comprehension deficits are addressed by the Visualizing and Verbalizing for Comprehension(V/V) program. This program is based on the premise that verbal and oral information is processed through internal visualization. "Visualization is directly related to language comprehension, language expression, and critical thinking. Imagery is the sensory connection in the brain." Good reading comprehension is dependent upon a student's ability to visualize and overlap sequences of images, much as in a movie. The student is taught to image and verbalize images associated with individual words, sentences, paragraphs, and eventually, whole pages. Finally, the student is taught to use the imagery to take notes of important concepts over a chapter (Bell, 1987).

Upon completion of a semester of daily therapy in the program, the students are readministered the entire battery of tests. This gives a variety of objective measurements of the student's progress and helps identify the type and extent of further work that might be needed. At present, standard scores for all tests except the LAC and the CBRC are related to grade level.

Staff

The program is staffed by a full-time salaried director and 6 part-time hourly clinicians with undergraduate degrees. Each clinician has completed Iowa teaching certification requirements and has at least 40 hours of training in the ADD and V/V programs. The work load varies for each clinician with the amount of students enrolled within the program.

Administration

The program is located administratively within the Academic Affairs department under the supervision of the Vice-President for Academic Affairs. Administative and personnel affairs are coordinated directly with the vice-president. Academic concerns are coordinated and approved by the Humanities division and the Academic Council. The Vice-President for Academic Affairs appoints a Chance Advisory Committee to advise the director.

Facilities

A one-room office and four classrooms are assigned exclusively to the program. In addition, a writing laboratory with three small rooms and a large classroom that can be partitioned

into two rooms are available on a part-time basis.

Method

This evaluation was based upon (1) calculation of a mean GPA gain for the sample of Chance students to determine if the mean is positive, (2) a quasi-experiment to determine if reading comprehension, pronunciation, and spelling skills as measured by the post-test battery increased due to the Chance program, and (3) correlations of classroom performance (grade point gains) with Chance pre/post-test-test gains to find what impact the Chance Program may have upon a student's classroom performance as measured by GPA.

Quasi-experimental Study/Correlation Study

The main objective of the Chance Program is for the participants to increase their pronunciation/spelling and/or reading comprehension skills. This increase is measured within the program by a battery of pre- and post- tests. The degree to which this objective is achieved may be also implied by how well the student performs in class as measured by course grades (GPA).

Subjects

The total program population is 93 students who have received or are currently receiving at least one semester of Chance training. Fifty males and 43 females have or are currently participating in the program (see Table 1).

TABLE 1.0 NUMBER OF CHANCE STUDENTS BY AGE AND SEX

Age	Males	Females
17-21	41	39
22-26	7	2
27-49	2	2

Eighty-six percent (41 males and 39 females) were less than 22 years of age when they began the program. The majority of students began the program as freshmen (73), but there were also some sophomores (12), juniors (5), and seniors (3). A sample of 21 students (10 females and

11 males) was selected from the Chance student population for the evaluation.These students were selected because they had completed at least two years at Graceland and were still in attendance at Graceland in the Spring of 1991. These selection criteria allowed for the inclusion of the GPA correlation study. The student sample was divided according to their classification (based upon their pre-test results) into an ADD (spelling and pronunciation) test group and a V/V (reading comprehension) test group. The ADD and V/V test groups were composed of 10 (4 females and 6 males) and 11 (7 females and 4 males) students respectively.

The control group was composed of students who, although qualified, voluntarily elected to not participate in the Chance Program. Six students (2 females and 4 males) with at least one completed semester outside the Chance Program were available for the control group.

Procedure

Since all potential Chance students were volunteers based upon substandard academic performance, the quasi-experiment was performed using a nonequivalent control group design. pre/post-test-test score gains for each test were calculated for the students in both ADD and V/V groups. Descriptive statistics including mean and standard deviation were then calculated for test gains of the groups, since group means are a highly reliable way to achieve valid measurements of group gains (Steele, 1989).

The members of the control group were given the battery of tests and scored by a Chance clinician other than the evaluator. Pre/post-test gains were calculated for each control student. The mean test score gains were calculated for both the control and test groups. An unpaired t-test comparison of the ADD and V/V groups was made with the control group to determine if the Chance students significantly increased their test scores relative to the control group.

A correlation was performed to determine if there is a relationship between a change in test scores and a change in GPA. pre/post-test gains for a semester were correlated with GPA gains for the same semester for both the ADD and the V/V groups.

Results

The mean increase in test score variations was significantly higher for the Chance students than for the control group (see table 2). ADD students increased their pronunciation abilities by an average of two years and their spelling by an average of almost two years after only one semester of therapy. V/V students increased their comprehension scores by two years.

TABLE 2

MEAN TEST SCORE GAINS

GROUP	LAC	PPV	WRM	WRAT R	SOR	GORT C	WS	WRAT S	CBRC
ADD	10.9	1.2	5.9	2.3	1.7	.3	2.5	1.3	22.0
V/V		.9				2.3			18.3
CONTROL	.3	-1.3	.9	.9	.9	-.4	.1	.6	-4.5

Mean of Chance test score gains. The V/V students are only post-tested using the PPV, GORT C, and the CBRC. The LAC numbers are the mean gains in correct responses. The CBRC numbers are the mean gains in percentile score. The rest are the mean gains in grade level.

The ADD group increases were significantly higher for the LAC, PPV, WS, and CBRC. The V/V group increases were significantly higher for the CBRC. (see Table 3 & 4).

TABLE 3

SIGNIFICANCE OF ADD GAINS

TEST	T-VALUE	P-VALUE	DF
LAC	2.995	*.005 < P < .010	10
PPV	1.831	*.025 < P < .050	10
WRM	1.782	.050 < P < .100	7
WRAT R	1.320	.100 < P < .375	7
SOR	0.784	.100 < P < .375	10
GORT C	1.117	.100 < P < .375	9
WS	1.985	*.025 < P < .050	8
WRAT S	0.498	.100 < P < .375	8
CBRC	2.121	*.025 < P < .050	11

Unpaired t-values and significance of test score gains between the ADD student test group and the control group for each test.

TABLE 4
SIGNIFICANCE OF V/V GAINS

TEST	T-VALUE	P-VALUE	DF
PPV	1.627	.050 < P < .100	9
GORT C	1.663	.050 < P < .100	11
CBRC	1.956	*.025 < P < .050	13

Unpaired t-values and significance of test score gains between the V/V student test group and the control group for each test.

Positive correlations between test score gains and GPA gains were obtained for the ADD group in all tests except for the GORT-C and the CBRC tests. A positive correlation for the GORT C(comprehension) was obtained for the V/V group(see Table 5). The average increase in GPA for Chance students was .49 in of a four point system.

TABLE 5
CORRELATION COEFFICIENTS BETWEEN TEST SCORE GAINS
AND GPA GAINS FOR ADD AND V/V STUDENTS

GROUP	PPV	WRM	WRAT R	SOR	GORT-C	WS	WRAT S	CBRC
ADD	-.479	.671	.349	.693	-.265	.620	.418	-.599
V/V	-.310				.150			-.660

Conclusions

The results of the quasi-experimental study/correlation study are significant and should be viewed as preliminary to a larger, more complete effort that includes a larger sample and control group and a comprehensive subjective evaluation.

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